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**From:** Wayne Miller [Miller.Wayne@azdeq.gov]  
**Sent:** 9/1/2015 6:22:42 PM  
**To:** d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]  
**Subject:** 2015-9-1 - wafb - thanks - PCE TCE etc at ST012 - EDavis EPA

Thank you.

**From:** d'Almeida, Carolyn K. [mailto:dAlmeida.Carolyn@epa.gov]  
**Sent:** Tuesday, September 01, 2015 11:17 AM  
**To:** Wayne Miller <Miller.Wayne@azdeq.gov>  
**Cc:** steve <steve@uxopro.com>  
**Subject:** 2015-9-1 - wafb - PCE TCE etc at ST012 - EDavis EPA - cda epa

### Comments from Eva

**From:** Davis, Eva  
**Sent:** Monday, August 31, 2015 11:28 AM  
**To:** d'Almeida, Carolyn K.  
**Subject:** RE: sitewide groundwater model is useful...

Hi Carolyn –

I've been looking at the data a little more, trying to get a history. The Nov 2013 data shows PCE in U12 and W29 – U12 in the UWBZ is to the northwest of ST-12 and W-29 is in the LSZ way to the east of ST-12. This data set also shows methylene chloride in 7 wells, RB-1A at 5.7 ppb, exceeding the MCL.

In the baseline data for SEE, which was only the SEE wells, taken in March 2014, no PCE was detected in any of the SEE wells. TCE was detected in 7 of the 13 CZ wells, and 5 of 17 UWBZ wells. Mostly the concentrations were below 1 ppb, but a couple were greater than 1 ppb (CZ10 had highest concentration in the CZ at 3.4 ppb, UWBZ 09, 11, 12, and 17 all had concentrations ~ 2 ppb). Most of these wells are on the northern side of the treatment area, but a few are to the south, and not all wells on the northern side were affected. No PCE or methylene chloride were detected. Many of the most highly contaminated wells had high detection limits, which may have masked the presence of chlorinated compounds.

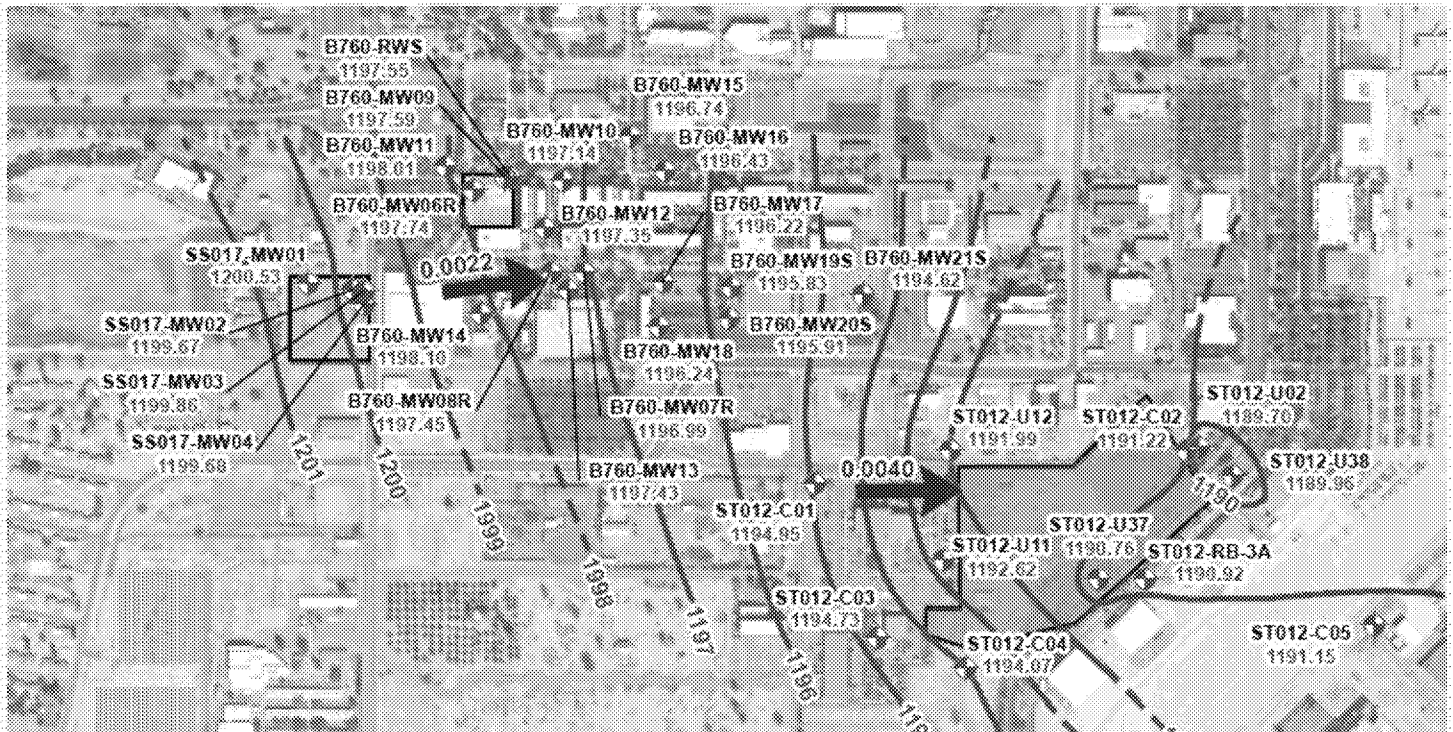
The monthly SEE samples, which started in November 2014, show PCE in U12 and W29 at concentrations below 1 ppb, consistent with the Nov 2013 data. TCE is being detected in C02, RB-3A, U02, U37, U38, C04 and W29 (these last 2 wells were sampled in Nov 2014 but not after that). TCE moved into these wells between Nov 2013 and Nov 2014. All of these wells are to the east and southeast of ST-12. For the most part the concentrations are fairly constant with the highest concentration (3.4 ppb) having occurred in U02, which is directly to the east. Thus it is not clear that the TCE came from sites to the west as shown in the figure below, but the PCE sure could have. In the SEE data, methylene chloride was mostly nondetect early on, in March 2014 it showed up at low concentrations in several wells, and the concentrations were then higher in April, however, the April detections were "B" qualified, so I'm not sure about using that data for making conclusions.

I'm not at all sure what is to the east of ST-12 that may be supplying the TCE, but I do wonder if the SEE extraction could be pulling something in that directions –

Eva

Wayne

I was thinking about the finding of Beta BHC and the TCE/PCE at ST-12 and wondering where it might be coming from, and the remaining unanswered questions at the SS17 source area and how the pesticides reached groundwater. It looks like from the flow path contaminants mobilized would end up around ST12 MW38; however current pumping at ST12 is probably capturing contaminants and drawing them further to the south. It would be helpful to get an updated groundwater model that incorporates the impact of SEE operations.



*"Because a waste is a terrible thing to mind..."*

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disclosure of the information in this e-mail and its attachments. If you have received this e-mail in error, please immediately notify the person named above by reply e-mail, and then delete the original e-mail. Thank you.